

Untitled.ST25  
SEQUENCE LISTING

<110> Her Majesty the Queen in Right of Canada as Represented by  
the Minister of Health

<120> Anti-SARS Monoclonal Antibodies

<130> 85084-803

<150> US60/526971

<151> 2003-12-05

<150> US60/568225

<151> 2004-05-06

<160> 43

<170> PatentIn version 3.2

<210> 1

<211> 133

<212> PRT

<213> Mus musculus

<400> 1

Glu Val Arg Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala  
1 5 10 15

Ser Val Lys Ile Ser Cys Lys Thr Ser Gly Tyr Thr Phe Thr Glu Tyr  
20 25 30

Thr Met His Trp Val Lys Gln Ser His Gly Lys Asn Leu Glu Trp Ile  
35 40 45

Gly Gly Ile Asn Pro Asn Asn Gly Gly Thr Thr Tyr Asn Gln Lys Phe  
50 55 60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr  
65 70 75 80

Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys  
85 90 95

Ser Arg Gly Asp Tyr Gly Thr Ser Tyr Gly Tyr Phe Asp Val Trp Gly  
100 105 110

Ala Gly Thr Thr Val Thr Val Ser Ser Ala Lys Thr Thr Ala Pro Ser  
115 120 125

Val Tyr Pro Leu Ala  
130

<210> 2

## Untitled.ST25

<211> 128  
 <212> PRT  
 <213> Mus musculus

<400> 2

Val Glu Leu Leu Glu Ser Gly Thr Val Leu Ala Arg Pro Gly Ala Ser  
 1 5 10 15

Val Lys Met Ser Cys Glu Ala Ser Gly Tyr Thr Phe Thr Thr Tyr Trp  
 20 25 30

Met His Trp Ile Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly  
 35 40 45

Ala Ile Tyr Pro Gly Asn Ser Asp Thr Thr Tyr Asn Gln Lys Phe Lys  
 50 55 60

Gly Lys Ala Lys Leu Thr Ala Val Thr Ser Thr Ser Thr Ala Tyr Met  
 65 70 75 80

Glu Leu Ser Ser Leu Thr Asn Glu Asp Ser Ala Val Tyr Tyr Cys Thr  
 85 90 95

Arg Glu Gly Ile Pro Gln Leu Leu Arg Thr Met Asp Tyr Trp Gly Gln  
 100 105 110

Gly Thr Ser Val Thr Val Ser Ser Ala Lys Thr Thr Pro Pro Ser Val  
 115 120 125

<210> 3  
 <211> 127  
 <212> PRT  
 <213> Mus musculus

<400> 3

Val Gln Leu Leu Glu Ser Gly Thr Val Leu Ala Arg Pro Gly Ala Ser  
 1 5 10 15

Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Ser Tyr Trp  
 20 25 30

Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly  
 35 40 45

Ala Ile Tyr Pro Gly Asn Ser Asp Thr Ser Tyr Asn Gln Lys Phe Lys  
 50 55 60

Gly Lys Ala Lys Leu Thr Ala Val Thr Ser Ala Ser Thr Ala Tyr Met  
 65 70 75 80

## untitled.ST25

Glu Leu Ser Ser Leu Thr Asn Glu Asp Ser Ala Val Tyr Tyr Cys Thr  
85 90 95

Arg Ser Val Tyr Tyr Gly Tyr Gly Tyr Phe Asp Val Trp Gly Ala Gly  
100 105 110

Thr Thr Val Thr Val Ser Ser Ala Lys Thr Thr Pro Pro Ser Val  
115 120 125

<210> 4  
<211> 226  
<212> PRT  
<213> Mus musculus

<400> 4

Glu Val Gln Leu Glu Glu Ser Gly Thr Val Leu Ala Arg Pro Gly Ala  
1 5 10 15

Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Ser Tyr  
20 25 30

Trp Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Asp Trp Ile  
35 40 45

Gly Ala Ile Tyr Pro Glu Asn Ser Asp Thr Ser Tyr Asn Gln Lys Phe  
50 55 60

Lys Gly Lys Ala Lys Leu Thr Ala Val Thr Ser Ala Ser Thr Ala Tyr  
65 70 75 80

Met Glu His Ser Ser Leu Thr Asn Glu Asp Ser Ala Val Tyr Tyr Cys  
85 90 95

Thr Arg Ser Val Tyr Tyr Gly Tyr Gly Tyr Phe Asp Val Trp Gly Ala  
100 105 110

Gly Thr Thr Val Thr Val Ser Ser Ala Lys Thr Thr Ala Pro Ser Val  
115 120 125

Tyr Pro Leu Ala Pro Val Cys Gly Asp Thr Thr Gly Ser Ser Val Thr  
130 135 140

Leu Gly Cys Leu Val Lys Gly Tyr Phe Pro Glu Pro Val Thr Leu Thr  
145 150 155 160

Trp Asn Ser Gly Ser Leu Ser Ser Gly Val His Thr Phe Pro Ala Val  
165 170 175

## Untitled.ST25

Leu Gln Ser Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Thr Ser  
180 185 190

Ser Thr Trp Pro Ser Gln Ser Ile Thr Cys Asn Val Ala His Pro Ala  
195 200 205

Ser Ser Thr Lys Val Asp Lys Lys Ile Glu Pro Arg Val Pro Thr Ser  
210 215 220

Gln Asn  
225

<210> 5  
<211> 131  
<212> PRT  
<213> Mus musculus

<400> 5

Leu Val Gln Leu Glu Glu Ser Gly Thr Val Leu Pro Arg Pro Gly Ala  
1 5 10 15

Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr  
20 25 30

Trp Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile  
35 40 45

Gly Ala Ile Tyr Pro Gly Asn Ser Asp Thr Asn Tyr Asn Gln Lys Phe  
50 55 60

Lys Gly Arg Ala Thr Leu Thr Ala Val Thr Ser Thr Ser Thr Ala Ser  
65 70 75 80

Met Glu Leu Ser Ser Leu Thr Asn Glu Asp Ser Ala Val Tyr Tyr Cys  
85 90 95

Thr Arg Asp Gly Tyr Gly Ser Leu Tyr Tyr Tyr Ala Met Asp Phe Trp  
100 105 110

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Ala Lys Thr Thr Ala Pro  
115 120 125

Ser Val Lys  
130

<210> 6  
<211> 133

## Untitled.ST25

<212> PRT  
 <213> Mus musculus

<400> 6

Glu Val Gln Leu Glu Glu Ser Gly Thr Val Leu Ala Arg Pro Gly Ala  
 1 5 10 15

Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Thr Tyr  
 20 25 30

Arg Met His Trp Ile Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile  
 35 40 45

Gly Ala Ile Tyr Pro Gly Asn Ser Asp Thr Thr Tyr Asn Gln Lys Phe  
 50 55 60

Lys Asp Lys Ala Lys Leu Thr Ala Val Thr Ser Thr Ser Ser Ala Tyr  
 65 70 75 80

Met Glu Leu Ser Ser Leu Thr Asn Glu Asp Ser Ala Val Tyr Phe Cys  
 85 90 95

Thr Arg Glu Gly Ile Pro Gln Leu Leu Arg Thr Leu Asp Tyr Trp Gly  
 100 105 110

Gln Gly Thr Ser Val Thr Val Ser Ser Ala Lys Thr Thr Ala Pro Ser  
 115 120 125

Val Tyr Pro Leu Ala  
 130

<210> 7  
 <211> 130  
 <212> PRT  
 <213> Mus musculus

<400> 7

Glu Val Gln Leu Glu Glu Ser Gly Pro Gly Leu Val Ala Pro Ser Gln  
 1 5 10 15

Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu Thr Asn Tyr  
 20 25 30

Asp Ile Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Leu  
 35 40 45

Gly Ile Ile Trp Thr Gly Gly Gly Thr Ser Tyr Asn Ser Ala Phe Met  
 50 55 60

## Untitled.ST25

Ser Arg Leu Ser Ile Ser Lys Asp Asn Ser Lys Ser Gln Val Phe Leu  
65 70 75 80

Lys Met Asn Ser Leu Gln Thr Asp Asp Thr Ala Ile Tyr Tyr Cys Val  
85 90 95

Arg Asp Arg Val Tyr Tyr Phe Pro Met Asp Tyr Trp Gly Gln Gly Thr  
100 105 110

Ser Val Thr Val Ser Ser Ala Lys Thr Thr Ala Pro Ser Val Tyr Pro  
115 120 125

Leu Ala  
130

<210> 8  
<211> 139  
<212> PRT  
<213> Mus musculus

<400> 8

Met Glu Trp Ser Trp Val Phe Leu Phe Leu Val Ala Thr Ala Thr Asp  
1 5 10 15

Val His Ser Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Lys  
20 25 30

Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe  
35 40 45

Thr Asn Tyr Trp Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu  
50 55 60

Glu Trp Ile Gly Glu Ile Asn Pro Gly Asn Gly Arg Thr Asn Tyr Asn  
65 70 75 80

Gly Asn Phe Met Asn Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn  
85 90 95

Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val  
100 105 110

Tyr His Cys Ala Arg Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr  
115 120 125

Val Ser Ser Ala Lys Thr Thr Pro Pro Ser Val  
130 135

## Untitled.ST25

<210> 9  
 <211> 123  
 <212> PRT  
 <213> Mus musculus

<400> 9

Val Gln Leu Leu Glu Ser Gly Ala Glu Leu Val Lys Pro Gly Ala Ser  
 1 5 10 15

Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Trp  
 20 25 30

Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly  
 35 40 45

Glu Ile Asn Pro Ser Asn Gly Arg Thr Asn Tyr Asn Gly Asn Phe Glu  
 50 55 60

Ser Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr Met  
 65 70 75 80

His Leu Ser Ser Leu Thr Tyr Glu Asp Ser Ala Val Tyr His Cys Thr  
 85 90 95

Arg Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Ala  
 100 105 110

Lys Thr Thr Ala Pro Ser Val Tyr Pro Leu Ala  
 115 120

<210> 10  
 <211> 120  
 <212> PRT  
 <213> Mus musculus

<400> 10

Asp Ile Leu Met Thr Gln Ser Pro Thr Ser Phe Ala Val Ser Leu Gly  
 1 5 10 15

Gln Arg Ala Thr Ile Ser Cys Arg Thr Ser Gln Ser Val Ser Thr Ser  
 20 25 30

Ser Tyr Ser Tyr Met His Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro  
 35 40 45

Lys Leu Leu Ile Lys Tyr Ala Ser Asn Leu Glu Ser Gly Val Pro Ala  
 50 55 60

## Untitled.ST25

Arg Phe Ser Gly Ser Gly Ser Gly Ser Asp Phe Thr Leu Asn Ile His  
65 70 75 80

Pro Val Glu Glu Gly Asp Thr Ala Thr Tyr Tyr Cys Gln His Ser Trp  
85 90 95

Glu Ile Pro Cys Ala Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg  
100 105 110

Ala Asp Ala Ala Pro Thr Val Ser  
115 120

<210> 11  
<211> 116  
<212> PRT  
<213> Mus musculus

<400> 11

Glu Leu Val Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Leu Gly  
1 5 10 15

Glu Arg Val Ser Leu Thr Cys Arg Ala Ser Gln Glu Ile Ser Gly Tyr  
20 25 30

Leu Ser Trp Leu Gln Gln Lys Pro Asp Gly Thr Ile Lys Arg Leu Ile  
35 40 45

Tyr Ala Ala Ser Thr Leu Asp Ser Gly Val Pro Lys Arg Phe Ser Gly  
50 55 60

Ser Arg Ser Gly Ser Asp Tyr Ser Leu Thr Ile Ser Ser Leu Glu Ser  
65 70 75 80

Glu Asp Phe Ala Asp Tyr Tyr Cys Leu Gln Tyr Ile Ser Tyr Pro Trp  
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Ala Asp Ala Ala  
100 105 110

Pro Thr Val Ser  
115

<210> 12  
<211> 116  
<212> PRT  
<213> Mus musculus

<400> 12

Asp Ile Leu Met Thr Gln Ser His Lys Cys Met Ser Thr Ser Val Gly  
Page 8



<210>	13
<211>	116
<212>	PRT
<213>	Mus musculus
<400>	13

Asp Ile Leu Met Thr Gln Ser His Lys Phe Met Ser Thr Ser Val Gly  
1 5 10 15

Asp Arg Val Ser Ile Thr Cys Lys Ala Ser Gln Asp Val Ser Thr Ala  
20 25 30

Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile  
35 40 45

Tyr Trp Ala Ser Thr Arg His Thr Gly Val Pro Asp Arg Phe Thr Gly  
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Val Gln Ala  
65 70 75 80

Glu Asp Leu Ala Leu Tyr Tyr Cys Gln Gln His Tyr Ser Thr Pro Tyr  
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Ala Asp Ala Ala  
page 9

Page 10

## Untitled.ST25

Tyr Ala Ala Ser Thr Leu Asp Ser Gly Val Pro Lys Arg Phe Ser Gly  
 50 55 60

Ser Arg Ser Gly Ser Asp Tyr Ser Leu Thr Ile Ser Ser Leu Glu Ser  
 65 70 75 80

Glu Asp Phe Ala Asp Tyr Tyr Cys Leu Gln Tyr Val Ser Tyr Pro Trp  
 85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Ala Asp Ala Ala  
 100 105 110

Pro Thr Val  
 115

<210> 16  
 <211> 110  
 <212> PRT  
 <213> Mus musculus

<400> 16

Glu Leu Val Met Thr Gln Ser Pro Val Ser Ile Thr Ala Ser Arg Gly  
 1 5 10 15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Ser Ser Ile Ser Ser Asn  
 20 25 30

Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Ser Ser Pro Lys Leu Leu  
 35 40 45

Ile Tyr Arg Thr Ser Ile Leu Ala Ser Gly Val Leu Asp Thr Phe Ser  
 50 55 60

Gly Ser Gly Ser Glu Ser Ser Tyr Thr Leu Thr Ile Ser Cys Met Gln  
 65 70 75 80

Asp Glu Val Ala Ala Thr Tyr Tyr Cys Gln Gln Gly Ser Ser Ser Pro  
 85 90 95

Pro His Val Arg Arg Gly Asp Gln Ala Gly Asn Lys Thr Gly  
 100 105 110

<210> 17  
 <211> 116  
 <212> PRT  
 <213> Mus musculus

<400> 17

## Untitled.ST25

Glu Leu Val Met Thr Gln Ser Pro Ala Ser Leu Ser Val Ala Thr Gly  
1 5 10 15

Lys Lys Val Thr Ile Arg Cys Ile Ser Ser Thr Asp Ile Asp Asp Asp  
20 25 30

Met Asn Trp Tyr Gln Gln Lys Ala Gly Lys Pro Pro Lys Leu Leu Ile  
35 40 45

Ser Glu Gly Asn Ile Phe Ser Pro Gly Val Pro Ser Arg Phe Ser Ser  
50 55 60

Ser Gly Asn Gly Thr Asp Phe Val Phe Thr Val Glu Asn Thr Leu Ser  
65 70 75 80

Glu Asp Val Ala Asp Asn Tyr Cys Leu Gln Ser Asp Asn Met Pro Phe  
85 90 95

Thr Phe Gly Ser Gly Thr Lys Leu Gly Ile Lys Arg Ala Asp Ala Ala  
100 105 110

Pro Thr Val Ser  
115

<210> 18  
<211> 116  
<212> PRT  
<213> Mus musculus

<400> 18

Glu Leu Val Met Thr Gln Ser Pro Ala Ser Leu Ser Val Ile Thr Gly  
1 5 10 15

Lys Lys Val Thr Ile Arg Cys Ile Ser Asn Thr Asp Ile Asp Asp Asp  
20 25 30

Leu Asn Trp Ser Gln Leu Lys Ala Gly Glu Pro Pro Lys Leu Leu Ile  
35 40 45

Ser Glu Gly Asn Ile Phe Ser Pro Gly Val Pro Ser Arg Phe Ser Ser  
50 55 60

Ser Gly Asn Gly Thr Asp Phe Val Phe Thr Ile Glu Asn Thr Leu Ser  
65 70 75 80

Glu Asp Val Ala Asn Asn Tyr Cys Phe Gln Ser Asp Asn Met Pro Phe  
85 90 95

## Untitled.ST25

Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Arg Ala Asp Ala Ala  
 100 105 110

Pro Thr Val Ser  
 115

<210> 19  
 <211> 457  
 <212> DNA  
 <213> Mus musculus

<400> 19  
 atggaatgga gctgggtctt tctctttctc ctgtcaggaa ctgcagggtg cctctctgag 60  
 gtccggctgc aacagtctgg acctgaactg gtgaagcctg gggcttcagt gaagatatcc 120  
 tgcaagactt ctggatacac attcactgaa tacaccatgc actgggtgaa gcagagccat 180  
 ggaaagaacc ttgagtggat tggagggtatt aatcctaata atggtggtac tacctacaac 240  
 cagaagttaa agggcaaggc cacattgact gtagacaagt cctccaacac agcctacatg 300  
 gagctccgca gcctgacatc tgaggattct gcagtctatt attgttcaag aggggactac 360  
 ggtactagct acgggtactt cgatgtcttg ggcgcaggga ccacggtcac cgtctcctca 420  
 gccaaaacaa cagcccatc ggtctatcca ctggcca 457

<210> 20  
 <211> 385  
 <212> DNA  
 <213> Mus musculus

<400> 20  
 gtggagctgc tcgagtcagg gactgtgctg gcaaggcctg gggcttcagt gaagatgtcc 60  
 tgcgaggctt ctggctacac ctttaccacc tactggatgc actggataaa acagaggcct 120  
 ggacagggtc tggaatggat tggcgctatt tatccaggaa atagtatac tacctacaac 180  
 cagaagttca agggcaaggc caaactgact gcagtcacat ccaccagcac tgcctacatg 240  
 gagctcagca gcctgacaaa tgaggactct gcggtctatt actgtacaag agagggaatt 300  
 cccaattac ttcggactat ggactactgg ggtcaaggga cctcagtcac cgtctcctca 360  
 gccaaaacaa caccatc ggtca 385

<210> 21  
 <211> 381  
 <212> DNA  
 <213> Mus musculus

<400> 21  
 gtccagctgc tcgagtcctg gactgtgctg gcaaggcctg gggcttcctg gaagatgtcc 60  
 tgcaaggctt ctggctacag ctttaccagc tactggatgc actgggtaaa acagaggcct 120

## Untitled.ST25

ggacaggggtc tagaatggat tgggtgctatt tctcctggaa atagtgatac tagctacaac 180  
 cagaagttca agggcaaggc caaactgact gcagtcacat ccgccagtac tgcctacatg 240  
 gagctcagca gcctgacaaa tgaggactct gcggctctatt actgtacaag atccgtttac 300  
 tacggctacg ggtacttcga tgtctggggc gcagggacca cggtcaccgt ctctcagcc 360  
 aaaacaacac ccccatcggt c 381

<210> 22  
 <211> 678  
 <212> DNA  
 <213> Mus musculus

<400> 22  
 gaggtgcagc tggaggagtc tgggactgtg ctggcaaggc ctggggcttc cgtgaagatg 60  
 tcctgcaagg cttctggcta cagctttacc agctactgga tgcactgggt aaaacagagg 120  
 cctggacagg gtctagattg gattggtgct atttatcctg aaaatagtga tactagctac 180  
 aaccagaagt tcaagggcaa ggccaaactg actgcagtca catccgccag cactgcctac 240  
 atggagcaca gcagcctgac aaatgaggac tctgcggtct attactgtac aagatccgtt 300  
 tactacggct acgggtactt cgatgtctgg ggcgcaggga ccacggtcac cgtctcctca 360  
 gccaagacaa cagcccatc ggtctatcca ctggccccctg tgtgtggaga tacaactggc 420  
 tcctcggtga ctctaggatg cctgggtcaag ggttatttcc ctgagccagt gaccttgacc 480  
 tggaaactctg gatccctgtc cagtgggtgtg cacaccttcc cagctgtcct gcagtctgac 540  
 ctctacaccc tcagcagctc agtgactgta acctcgagca cctggcccag ccagtccatc 600  
 acctgcaatg tggcccaccc ggcaagcagc accaagggtg acaagaaaat tgagcccaga 660  
 gtgcccacta gtcagaac 678

<210> 23  
 <211> 398  
 <212> DNA  
 <213> Mus musculus

<400> 23  
 ttggtgcagc tggaggagtc tgggactgtg ttgccaaggc ctggggcttc agtgaagatg 60  
 tcctgcaagg cttctggcta cacctttacc agctactgga tgcactgggt aaaacagagg 120  
 cctggacagg gtctggaatg gattggcgct atttatcctg gaaatagtga tactaactac 180  
 aaccagaagt tcaagggcag ggccacactg actgcagtca catccaccag cactgcctcc 240  
 atggagctca gcagcctgac aaatgaggac tctgcggtct attactgtac aagagacggc 300  
 tatggtagcc ttattacta tgctatggac ttctggggctc aaggaacctc agtcaccgtc 360  
 tcctcagcca aaacaacagc cccatcggtc aagggcga 398

## Untitled.ST25

<210> 24  
 <211> 399  
 <212> DNA  
 <213> Mus musculus

<400> 24  
 gaggtgcagc tggaggagtc tgggactgtg ctggcaaggc ctggggcttc agtgaagatg 60  
 tcctgcaagg cttctggcta cacctttacc acctaccgga tgcactggat aaaacagagg 120  
 cctggacagg gtctggaatg gattggcgct atttatcctg gaaatagtga tactacctac 180  
 aaccagaagt tcaaggacaa ggccaaactg actgcagtca catccaccag ctctgcctac 240  
 atggagctca gcagcctgac aaatgaggac tctgcggctt atttctgtac aagagagggg 300  
 attccccaat tacttcggac tttggactac tggggctcaag gaacctcagt caccgtctcc 360  
 tcagccaaaa caacagcccc atcgggtctat ccactggcc 399

<210> 25  
 <211> 392  
 <212> DNA  
 <213> Mus musculus

<400> 25  
 tgaggcgcag ctggaggagt caggacctgg cctgggtggcg ccctcacaga gcctgtccat 60  
 tacctgcact gtctctgggt tctcattaac gaactatgat ataagctgga ttcgccagcc 120  
 accaggaaag ggtctggagt ggcttggat aatatggact ggtggaggca caagttataa 180  
 ttcagctttc atgtccagac tgagcatcag caaggacaac tccaagagcc aagttttctt 240  
 aaaaatgaac agtctgcaaa ctgatgacac agccatatat tactgtgtaa gagatagggg 300  
 ctactacttc cctatggact actggggctca aggaacctca gtcaccgtct cctcagccaa 360  
 aacaacagcc ccatcgggtct atccactggc ca 392

<210> 26  
 <211> 417  
 <212> DNA  
 <213> Mus musculus

<400> 26  
 atggaatgga gctgggtctt tctctttttg gtagcaacag ctacagatgt ccactcccag 60  
 gtccaactgc agcagcctgg ggctgaactg gtgaagcctg gggcttcagt gaaagtgtcc 120  
 tgcaaggctt ctggctacac cttaccaac tactggatac actgggtgaa gcagaggcct 180  
 ggacagggcc ttgagtggat tggagagatt aatcctggca acggtcgtac taactataat 240  
 gggaacttca tgaacaaggc cactctgact gtagacaaat cctccaacac agcctacatg 300  
 caactcagca gcctgacatc tgaggactct gcggtctatc actgtgcaag attagactac 360  
 tggggccaag gcaccactct cacagtctcc tcagccaaaa caacaccccc atcggtc 417

## Untitled.ST25

<210> 27  
 <211> 369  
 <212> DNA  
 <213> Mus musculus

<400> 27  
 gtccagctgc tcgagctctgg ggctgaactg gtgaagcctg gggcttcagt gaaagtgtcc 60  
 tgcaaggctt ctggctacac cttcaccagc tactggatac actgggtgaa gcagaggcct 120  
 ggacagggcc ttgagtggat tggagagatt aatcctagca acggtcgtac taactataat 180  
 gggaaacttcg agagcaaggc cacactgact gtagacaaat cctccaacac agcctacatg 240  
 cacctcagca gcctgacata tgaggactct gcggctctatc actgtacaag attagactac 300  
 tggggccaa ggcaccactct cacagtctcc tcagccaaaa caacagcccc atcgggtctat 360  
 ccactggcc 369

<210> 28  
 <211> 380  
 <212> DNA  
 <213> Mus musculus

<400> 28  
 gggcccagcc ggccgagctc gacattctga tgaccagtc tcctacttcc tttgctgtat 60  
 ctctggggca gagggccacc atctcatgca ggaccagcca aagtgtcagt acatctagct 120  
 atagttatat gactgggtac caacagaaac caggacagcc acccaaactc ctcacatcaagt 180  
 atgcatccaa cctagaatct ggggtccctg ccaggttcag tggcagtggg tctgggtcag 240  
 acttcaccct caacatccat cctgtggagg agggggatac tgcaacatat tactgtcagc 300  
 acagttggga gattccgtgc gcgttcggag gggggaccaa gctggaaata aaacgggctg 360  
 atgtgcacc aactgtatcc 380

<210> 29  
 <211> 359  
 <212> DNA  
 <213> Mus musculus

<400> 29  
 gtgccagatg tgagctcgtg atgaccagct ctccatcctc cttatctgcc tctctgggag 60  
 aaagagtcag tctcacttgt cgggcaagtc aggaaattag tggttattta agctggcttc 120  
 agcagaaaac agatggaact attaaacgcc tgatctacgc cgcattccact ttagattcgg 180  
 gtgtcccaa aagggttcagt ggcagtaggt ctgggtcaga ttattctctc accatcagca 240  
 gccttgagtc tgaagatttt gcagactatt actgtctaca atatattagt tatccgtgga 300  
 cgttcggggg aggtaccaag ctggaaatca aacgggctga tgctgcacca actgtatcc 359

<210> 30  
 <211> 348



## Untitled.ST25

<212> DNA  
<213> Mus musculus

<400> 30  
gacattctga tgaccagtc tcacaaatgc atgtccacat cagtaggaga cagggtcagc 60  
atcacctgca aggccagtca ggatgtgagt actgctgtag tctggtatca acaaaaacca 120  
gggcaatttc ctaaactact gatttactgg gcatccaccc ggcacactgg agtccctgat 180  
cgcttcacag gcagtggatc tgggacagat tatactctca ccatcagcag tgtgcaggct 240  
gaagacctgg cactttatta ctgtcagcaa cattatacca ctccgtacac gttcggaggg 300  
gggaccaagc tggaaataaa acgggctgat gctgcaccaa ctgtatcc 348

<210> 31  
<211> 368  
<212> DNA  
<213> Mus musculus

<400> 31  
gggcccagcc ggccgagctc gacattctga tgaccagtc tcacaaattc atgtccacat 60  
cagtaggaga cagggtcagc atcacctgca aggccagtca ggatgtgagt actgctgtag 120  
cctggtatca acaaaaacca gggcaatctc ctaaactact gatttactgg gcatccaccc 180  
ggcacactgg agtccctgat cgcttcacag gcagtggatc tgggacagat tatactctca 240  
ccatcagcag tgtgcaggct gaagacctgg cactttatta ctgtcagcaa cattatagca 300  
ctccgtacac gttcggaggg gggaccaagc tggaaataaa acgggctgat gctgcaccaa 360  
ctgtatcc 368

<210> 32  
<211> 350  
<212> DNA  
<213> Mus musculus

<400> 32  
gagctcgtga tgaccagtc tccatcctcc ctgtctgcct ctctgggaga cagagtcacc 60  
atcagttgca gggcaagtca ggacattagc aattatttaa actgggtatca gcagaaacca 120  
gatggaactg ttaaactcct gatctattac acatcaagat tacacgcagg agtcccatca 180  
aggttcagtg gcagtgggtc tggaaacagat tattctctca ccattagcaa cctggagcaa 240  
gaagatattg ccacttactt ttgccaacag ggttatacgc ttccgtacac gttcggaggg 300  
gggaccaagc tggaaataaa acgggctgat gctgcaccaa ctgtatccaa 350

<210> 33  
<211> 345  
<212> DNA  
<213> Mus musculus

<400> 33

## Untitled.ST25

gacattctga tgaccagtc tccatcctcc ttatctgcct ctctgggaga aagagtcagt 60  
 ctcaattgtc gggcaagtca ggaaattagt ggttacttaa gctggcttca ggagaaacca 120  
 gatggaacta ttaaacgcct gatctacgcc gcttccactt tagattctgg tgtcccaaaa 180  
 aggttcagtg gcagtaggtc tgggtcagat tattctctca ccatcagcag ccttgagtct 240  
 gaagattttg cagactatta ctgtctacaa tatgttagtt atccgtggac gttcgggtgga 300  
 ggcaccaagc tggaaatcaa acgggctgat gctgcaccaa ctgta 345

<210> 34  
 <211> 364  
 <212> DNA  
 <213> Mus musculus

<400> 34  
 gtgccagatg tgagctcgtg atgaccagtc ctccagtcata cataactgca tctcgagggg 60  
 agaaggtcac catcacctgc cgtgccagct caagtataag ttccaattac ttacactggt 120  
 accagcagaa gccaggatcc tcccctaaac ttttgattta taggacatcc atcctggcat 180  
 ctggagtcct ggacaccttc agtggcagtg ggtctgagag ctcttacct ctgacaatca 240  
 gctgcatgca ggacgaagtt gctgccactt actattgtca gcaggggagt agtagccac 300  
 cacacgttcg gaggggggac caagctggaa ataaaacggg ctgatgctgc accaactgta 360  
 tcca 364

<210> 35  
 <211> 359  
 <212> DNA  
 <213> Mus musculus

<400> 35  
 gtgccagatg tgagctcgtg atgaccagtc ctccagtcata cctgtccgtg gctacaggaa 60  
 aaaaagtcac catcagatgc ataagcagca ctgacattga tgatgatatg aactgggtacc 120  
 agcagaaggc aggaaaacct cctaaactcc ttatttcaga aggcaatatt tttagtcctg 180  
 gagtcccatc ccgattctcc agcagtggca atggcacaga ttttgTTTTT acagttgaaa 240  
 acacgctctc agaagatggt gcagataact actgtttgca aagtgataac atgccattca 300  
 cgttcggctc ggggacaaag ttgggaataa aacgggctga tgctgcacca actgtatcc 359

<210> 36  
 <211> 359  
 <212> DNA  
 <213> Mus musculus

<400> 36  
 gtgccagatg tgagctcgtg atgaccagtc ctccagtcata cctgtccgtg attacaggaa 60  
 aaaaagtcac catcagatgc ataagcaaca ctgacattga tgatgatttg aactgggtccc 120

Untitled.ST25

```

agctgaaggc aggagaacct cctaaactcc ttatttcaga aggcaatatt tttagtcctg 180
gagtgcccatc ccgattctcc agcagtggca atggcacaga ttttgTTTTT acaattgaaa 240
acacgctctc agaagatgtt gcaaataact actgtttcca aagtgataac atgccattca 300
cgttcggctc ggggacaaag ttggaaataa aacgggctga tgctgcacca actgtatcc 359

```

<210> 37  
 <211> 19  
 <212> DNA  
 <213> Artificial

<220>  
 <223> forward rt-pcr primer for polymerase gene

<400> 37  
 cagagccatg cctaactg 19

<210> 38  
 <211> 20  
 <212> DNA  
 <213> Artificial

<220>  
 <223> reverse primer for RT-PCR of polymerase gene

<400> 38  
 aatgtttacg caggtagcg 20

<210> 39  
 <211> 18  
 <212> DNA  
 <213> Artificial

<220>  
 <223> forward primer for nested PCR of polymerase gene

<400> 39  
 tgttaaacca ggtggaac 18

<210> 40  
 <211> 18  
 <212> DNA  
 <213> Artificial

<220>  
 <223> reverse primer for nested pcr of polymerase gene

<400> 40  
 cctgtgttgt agattgcg 18

<210> 41  
 <211> 21  
 <212> DNA  
 <213> Artificial

<220>

## untitled.ST25

<223> forward primer for real-time pcr of nucleoprotein

<400> 41

accagaatgg aggacgcaat g

21

<210> 42

<211> 25

<212> DNA

<213> Artificial

<220>

<223> reverse primer for real-timer pcr of nucleoprotein

<400> 42

gctgtgaacc aagacgcagt attat

25

<210> 43

<211> 16

<212> DNA

<213> Artificial

<220>

<223> TaqMan MGB probe - has 5' 6-carboxyfluorescein reporter dye

<400> 43

acccaaggt ttaccc

16